

Laparoscopic vs Robotic Sleeve Gastrectomy

Dr Reza Adib

LSG and RSG are two minimally invasive techniques used for bariatric surgery.

Background

My Bariatric practice includes sleeve gastrectomy, gastric balloons, gastric bypass and revisional surgery (total average 1000 operations/year).

My goal in such a busy practice is to have skills and organization to perform an operation with optimal operative time, length of stay, least post operative complications, and the best clinical outcome.

Wesley Hospital Theatre List – Friday, 23 August – Dr Vahid Reza Adib

Start 7:30 AM (Theatre 14)

	Patient	Contact	procedure
1	Mrs Vai *	M: 0435 *** ** E: v****@gmail.com	Laparoscopic Sleeve Gastrectomy Admit 23/08/2024 at 7:30AM Fast from: 12:00AM
	Age: 40 yrs Uninsured Items: 31575 - BMI:55		
2	Ms Jodie *	M: 0468 *** ** E: Jo****@hotmail.com	Laparoscopic Sleeve Gastrectomy Admit 23/08/2024 at 8:30AM Fast from: 12:00AM
	Age: 50 yrs Uninsured Items: 31575 - BMI:38		
3	Ms Lily *	M: 0400 *** ** E: lily****@yahoo.com	Laparoscopic Sleeve Gastrectomy Admit 23/08/2024 at 9:30AM Fast from: 5AM
	Age: 23 yrs Uninsured Items: 31575 - BMI:49		
4	Ms Ayla *	M: 0429 *** ** E: ayla****yahoo.com	Laparoscopic Sleeve Gastrectomy Admit 23/08/2024 at 10:30AM Fast from: 6AM
	Age: 31 yrs Uninsured Items: 31575 - BMI:44		
5	Miss Tiffany *	M: 0414 *** ** E: tiffany***@gmail.com	Laparoscopic Sleeve Gastrectomy Admit 23/08/2024 at 11:30AM Fast from: 6AM
	Age: 29 yrs Uninsured Items: 31575 - BMI:49		
6	Mr Rangı *	M: 0414 *** ** E: rp*****@yahoo.com	Laparoscopic Sleeve Gastrectomy Admit 23/08/2024 at 12:30PM Fast from: 6AM
	Age: 50 yrs Uninsured Items: 31575 - BMI:40		

Start 8:00 AM (Theatre 15)

	Patient	Contact	procedure
1	Ms Palatina*	M: 0434 *** ** E: lat*****@gmail.com	Laparoscopic Sleeve Gastrectomy Admit 23/08/2024 at 8AM Fast from: 12:00AM
	Age: 25 yrs Uninsured Items: 31575 - BMI: 46		
2	Ms Sherrie *	M: 0413 *** ** E: she****@outlook.com	Laparoscopic Sleeve Gastrectomy Admit 23/08/2024 at 9AM Fast from: 5AM
	Age: 43 yrs Uninsured Items: 31575 - BMI:46		
3	Ms Terani *	M: 0431 *** ** E: ifi****@gmail.com	Laparoscopic Sleeve Gastrectomy Admit 23/08/2024 at 10AM Fast from: 6AM
	Age: 28 yrs Uninsured Items: 31575 - BMI: 48		
4	Ms Georgia *	M: 0435 *** ** E: geo****@gmail.com	Laparoscopic Sleeve Gastrectomy Admit 23/08/2024 at 11AM Fast from: 6AM
	Age: 24 yrs Uninsured Items: 31575 - BMI: 35		
5	Mr Dominique *	M: 0414 *** ** E: df*****@gmail.com	Laparoscopic Sleeve Gastrectomy Admit 23/08/2024 at 12PM Fast from: 6AM
	Age: 23 yrs Uninsured Items: 31575- BMI: 38		
6	Mr Samuel *	M: 0414 *** ** E: ly*****@yahoo.com	Laparoscopic Sleeve Gastrectomy Admit 23/08/2024 at 13PM Fast from: 6AM
	Age: 26 yrs Uninsured Items: 31575 -BMI: 43		

Operative Time

Robotic Sleeve Gastrectomy generally has longer operative time compared to LSG.

Enrique Elli et al. *Obes Surg.* 2015 Jun.

110.6 vs 84.18 min (P <0.05).

Reza Alizadeh et al. *Surg Endosc.* 2019 Mar.

102±43 vs 74±36 (P <0.01)

Hassan Nasser et al. *J Surg Res.* 2020 May.

102.4±46 vs 74.7±37.5 (P <0.01)

Length of Hospital Stay

The length of hospital stay is slightly longer for RSG compared to LSG.

Reza Alizadeh et al. Surg Endosc. 2019

1.8 vs 1.7 days

Vasiliki S Tasiopoulou et al. Minerva Chir. 2018 Feb. (Review of the current evidence).

Significant longer stay for RSG.

Postoperative Complications

The incidence of postoperative complications such as leak, surgical site infections and serious morbidity is generally higher in RSG compared to LSG.

Hassan Nasser et al. J Surg Res. 2020 May.

Overall morbidity and mortality were similar but after adjustment, RSG represented an independent risk factor for organ-space surgical site infection in super obese patients.

Cost

RSG is associated with higher costs compared to LSG.

This includes both the initial hospital charges and cumulative costs over time.

Marcus J Adair et al. Am Surg. 2019

LSG US 38,569 vs RSG US 54,658 (P <0.001, this is a difference of 16k per case.)

Maher El Chaar et al. Surg Obes Relat Dis. 2019.

LSG marginally less costly.

Jean F Salem et al. J Robot Surg. 2023 Feb.

Predicted direct medical cost of RSG and LSG are comparable.

Matthew D Burstein et al. Surg Endosc. 2022.

Cumulative charges for 1 year from the date of surgery 57,484 RSG vs 43,769 LSG (30% higher for RSG)

Clinical Outcomes

Both techniques show similar clinical outcomes for weight loss and overall post operative complications.

RSG does not demonstrate clinical advantage over LSG in terms of efficacy.

Shuai Zhao et al. Obes Surg. 2024.

While both groups had comparable clinical outcomes, RSG patients did not achieve clear clinical outcome benefits.

Learning Curves

The learning curve for RSG is steeper, which may contribute to the longer operative times and higher complication rates observed in some studies.

Rena C Moon et al. *Obes Surg.* 2016 Oct.

Summary

Both LSG and RSG are effective for weight loss.

LSG is generally preferred due to being

- ▶ Less technology dependent,
- ▶ shorter operative time,
- ▶ Lower costs,
- ▶ Fewer Post Operative Complications.

My typical sleeve operative list

- ▶ 30 minutes set-up + 30 minutes operating.
- ▶ Chance to utilize two complete teams of anesthesiologists, assistants and scrub staff.
- ▶ 80% of my patients are self-insured and every dollar counts.



Total Cost Saving: \$193,068